

REMARKS

Applicant notes with appreciation the Office's indication that claims 1-54, and 69-98 are allowed and that claims 56, 57, 59, 60, 62, 65-68 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In view of the above amendments and the following remarks, reconsideration of the outstanding office action is respectfully requested.

The Office has rejected claims 55, 58, 61, 63, and 64 under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,285,478 to Wornell et al. (Wornell). The Office asserts that Wornell discloses a receiver, which receives a doublet in figures 5-10 and at column 7, line 11 to column 8, line 53, an extracting processor (38) which extracts the information from the doublet based on one of a plurality of time scales which was applied to the doublet prior to transmission in the abstract at lines 5-6) and at column 1, lines 35-46, column 3, lines 24-27, and column 4, lines 43-47.

Wornell does not disclose or suggest, "wherein the doublet comprises a combined pair of substantially matched base signals and wherein one of a plurality of time scales was applied to at least one of the pair of substantially matched base signals" as recited in claims 55 and 61. The Office's attention is respectfully directed to col. 8, lines 10-15 in Wornell which states, "The resulting transmitted waveform $x(t)$ includes the sequence $q(n)$ repeated at different rates within different frequency bands. If the data sequence $q(n)$ is repeated enough times, within frequency bands acceptable for the particular application, recovery of the sequence $q(n)$ can be accomplished accurately." The Office's attention is also respectfully directed to col. 4, lines 43-50 in Wornell which states, "The transmitter further includes circuitry for implementing a discrete-to-continuous time processing routine for embedding the sequence of numbers into a continuous waveform. The transmitted waveform has a frequency domain spectrum with a selected number of different frequency bands. The information is repeated in each frequency band at a different rate." Accordingly, in Wornell the information is modulated into each of a plurality of different base signals at different frequencies, not into a pair of substantially matched base signals.

As illustrated in FIGS. 1 and 2 and described on page 15, lines 13-21 of the above-identified patent application, the doublet comprises the base signal and a substantial copy of the base signal. Additionally, as set forth on page 9, lines 12-17, "The underlying

robustness of the present invention is primarily due to the structure of the doublet. The applied differential time-scale (compression or dilation) will be close to unity (unity time-scaling implies no compression or dilation) and the applied time-delay offset will be small relative to the length of the signal. Thus, each component of the doublet has approximately the same frequency content and the same signal structure at a given time.” (Emphasis added).

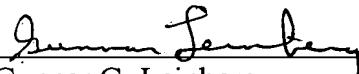
Accordingly, in view of the foregoing amendments and remarks, the Office is respectfully requested to reconsider and withdraw the rejection of claims 55 and 61. Since claim 58 depends from and contains the limitations of claim 55 and claims 63 and 64 depend from and contain the limitations of claim 61, these claims are distinguishable over the cited reference and patentable in the same manner as claims 55 and 61.

The Office has also objected to claims 56, 57, 59, 60, 62, 65-68 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In accordance with the Office’s statement, Applicant has amended claims 56, 57, 59, 60, 62, 65-68 so they are rewritten in independent form. In view of the foregoing amendments and remarks, the Office is respectfully requested to reconsider and withdraw the objection to these claims.

In view of all of the foregoing, applicant submits that this case is in condition for allowance and such allowance is earnestly solicited.

Respectfully submitted,

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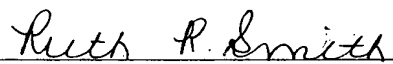
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